NUCLEAR DIVISION NEWS

UNION CARBIDE

A Newspaper for Employees of the Nuclear Division, Union Carbide Corporation

Vol. 1 — No. 12 | OAK RIDGE, TENNESSEE | Thursday, July 16, 1970

49 Youths Participate In Program

Forty-nine young people from 14 communities in East Tennessee have started work under the Youth Opportunity Program at the three Atomic Energy plants here.

The Youth Opportunity Program is for persons between the ages of 18 and 21 who are high school graduates or students planning to continue their education either in college, business, vocational or training schools.

A total of 21 participants has been selected by the Oak Ridge Gaseous Diffusion Plant, 16 by the Oak Ridge National Laboratory, and 12 by the Oak Ridge Y-12 Plant.

A breakdown of participants by community is as follows: Knoxville, 16; Oak Ridge, 10; Alcoa, 5; Clinton, 3; Sweetwater, 3; Kingston, 2; Lenoir City, 2; Oliver Springs, 2; and Briceville, Concord, Harriman, Lancing, Loudon and Philadelphia, 1 each.

This is the fifth year the Oak Ridge facilities have participated in the program. Early this year, Union Carbide's Central Employment staff members worked with guidance counselors in several counties to find suitable candidates for the program.

Fire Losses in 1969 Low at AEC Plants

Fire losses at facilities of the Atomic Energy Commission's Oak Ridge Operations (ORO) located in five states and Puerto Rico were held to only $4,996 during 1969.

Joseph A. Lenhard, director of the Safety Division for ORO, said last year's loss total was the second lowest in the history of the operations, following the record low of $2,815 in losses set during 1968.

Based on a 1969 replacement value of $8.1 billion for all ORO facilities, including inventories and equipment at several universities, the $4,996 figure computes to a fire loss of 62.5 cents per $1 million worth of property.

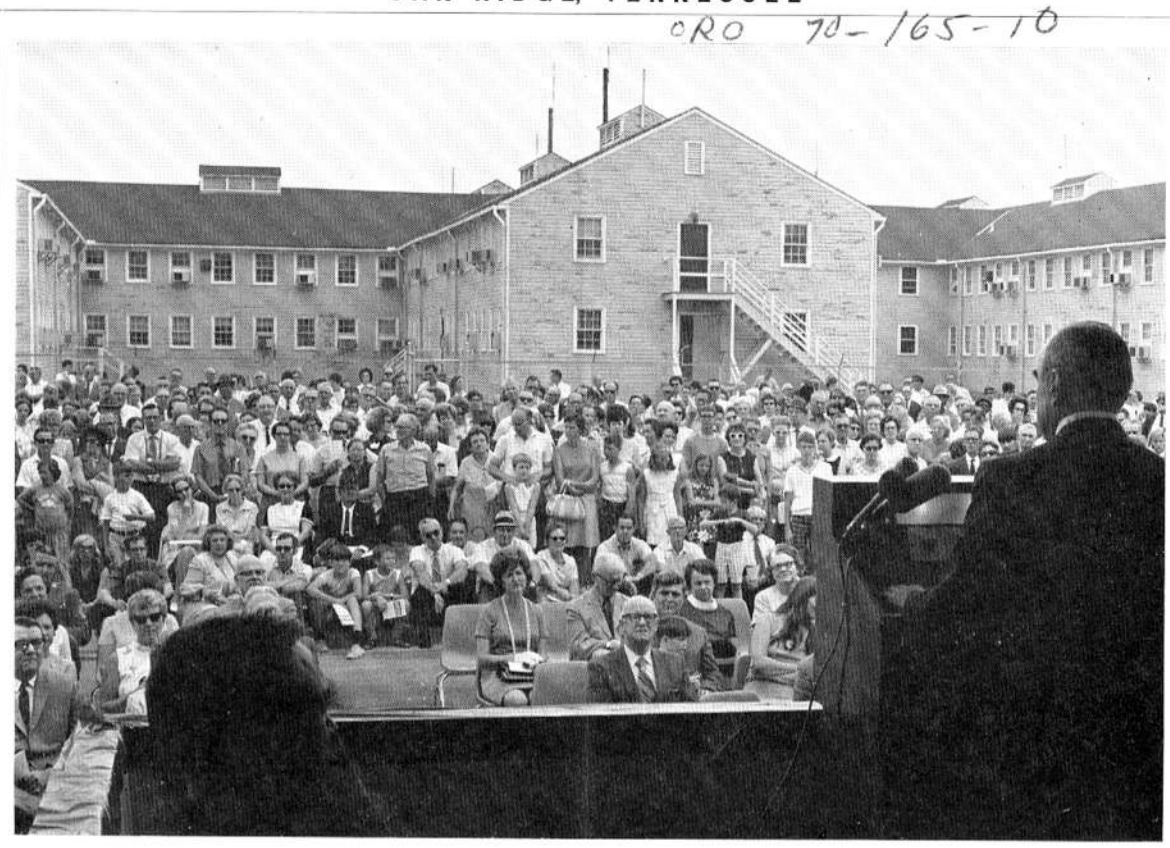
"We have been able to maintain our fire losses at a very low level through a broad fire prevention and protection program," according to Lenhard. "This includes design of facilities with low fire potential, equipping these facilities with good fire control equipment."

Nondestructive Testing's Smith Authors New Paper

J. H. Smith, Y-12 Nondestructive Testing, has authored an article in the June issue of "Instruments and Control Systems."

The article "Computers in Mechanical Testing" describes how a digital computer can be interfaced to a universal testing machine and a torsion tester to automatically record and store data from tension, compression, torsion, pin-bearing and double-shear tests.

ORO 70-165-10



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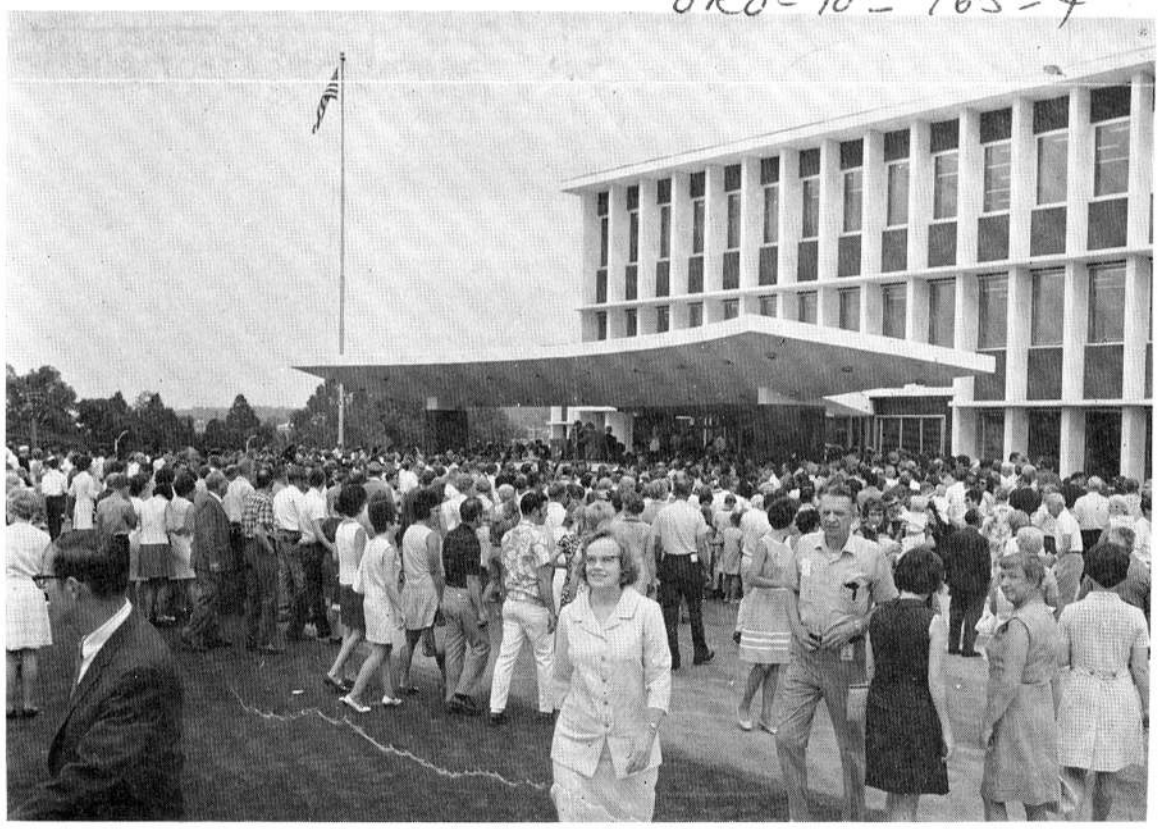


THE OLD AND THE NEW—These views of the dedication ceremonies of the new Federal Office Building capture both the old and the new. Above, S. R. Sapirie, Manager of Oak Ridge Operations, addresses the audience with the old AEC Building as the background. Below, visitors gather at the main entrance to the new facility. The pictures were taken by Frank Hoffman, AEC photographer.

$8.3 Million in Toll Enrichment for June

The Oak Ridge Gaseous Diffusion Plant shipped approximately 248,000 pounds of enriched uranium during June for use in nuclear reactors. The uranium, which was enriched at a charge of more than $8.3 million, filled orders authorized under two Atomic Energy Commission programs — Toll Enrichment and "Lease and Sale."

Under the Toll Enrichment Program, approximately $7.5 million work of separative work was performed for customers in West Germany and Switzerland, as well as in the States of Illinois, Virginia and South Carolina.

Customers are charged for the services required to separate from natural uranium the desired percentage of the uranium-235 isotope, which is the fissionable material used in nuclear reactors.

Under the "Lease and Sale" program, reactors in Illinois, Nebraska, South Carolina and Virginia received government-owned enriched uranium valued at more than $830,000.

Northern Power Signs Long Contract

The Atomic Energy Commission has announced the signing of an agreement to provide the Northern Power Company of Minneapolis, Minn., with approximately $59.8 million in uranium enrichment service under the AEC's toll enrichment program.

S. R. Sapirie, manager of the Commission's Oak Ridge Operations, said the contract calls for the AEC to supply the company with enriching services through the year 2000.

Uranium provided under the agreement will be used in the fabrication of fuel elements for the firm's Prairie Island Nuclear

(Continued on Page 6)

Students Start New Pre-Coop 'Pilot Program'

Nineteen students from five predominantly Negro engineering schools are working at facilities operated by the Nuclear Division this summer as part of a pilot cooperative program. The objective of the project is to encourage Negro students to pursue college studies in science and engineering.

The program, which is supported by the U. S. Atomic Energy Commission, is specifically aimed at students who, because of financial limitations, might otherwise be unable to attend college.

As part of the pilot program, the Nuclear Division places high school graduates recruited by each of the participating institutions in summer jobs as "pre-cooperative" students. Placement is contingent on their acceptance into an engineering or science cooperative curriculum at the institutions. In addition, the students must meet normal requirements for summer employment at Nuclear Division facilities.

Following the initial summer of employment, the student enrolls in the institution where he has been accepted. After his freshman year, he enters a Cooperative Education Program of alternate study and work periods as designed by his college or university.

Schools participating in the pilot program are: Howard University, Washington, D. C.; North Carolina A & T University, Greensboro; Southern University, Baton Rouge, La.; Tennessee State University, Nashville; and Tuskegee Institute, Tuskegee, Ala.

Six pre-cooperative students are working this summer at both the Oak Ridge Gaseous Diffusion Plant and Oak Ridge Y-12 Plant. Five students are working at Oak Ridge National Laboratory, and two at the Paducah Gaseous Diffusion Plant.

The students, their work locations and their home towns are as follows:

Oak Ridge Gaseous Diffusion Plant — Charlie Betts, Corinth, Miss.; Carol M. Crockett, Nashville, Tenn.; Steven Dukes, Union City, Ga.; Michael P. Farley, Lewistown, Pa.; John E. Newsome, Delray Beach, Fla.; and Donnie Williams, Baton Rouge, La.

Oak Ridge National Laboratory —Ronald S. Fleming, Woodleaf, N. C.; Leroy Jones, Baton Rouge, La.; Iwona Jean Lucas, Raleigh, N. C.; Booker McKinnon, Oak Ridge, Tenn.; and Jesse J. Smith, Prattville, Ala.

Oak Ridge Y-12 Plant — Reginald T. Booker, Greensboro, N.C.; Albert J. Boykins, Baton Rouge, La.; William D. Howard, Maryville, Tenn.; Clotis Johnson, Plaquemine, La.; Dorothy Sims, Dublin, Ga.; and Steven Williams, Montgomery, Ala.

Paducah Gaseous Diffusion Plant — Charles Rice, Jr., and Larry Steele, both of Nashville, Tenn.

135638

GIANT CLOSE-UP—Robert K. Bennett, Jr., Laboratory Development, is seen at the scanning electron microscope. Tests here are concerned primarily with the study of particles, fractography, machining and carbon composites. The relatively new instrument not only provides the researcher with information on the structure of materials, it also provides the layman with a new art form.

Scanning Electron Microscope

Research Tool Also Produces Art

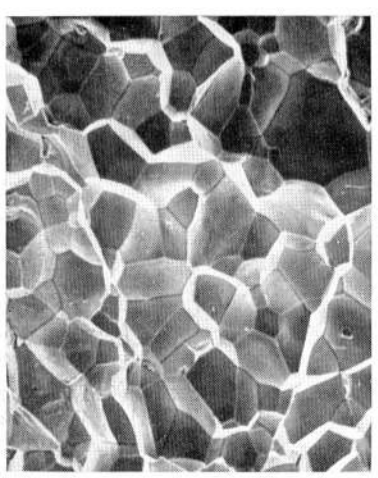
By R. L. WESLEY

Occasionally a scientific tool comes along that intrigues the non-scientific layman almost as much as it intrigues the scientist who uses it.

Pool-type nuclear reactors, cyclotrons and laser beams fall into this category. A relatively new instrument to be added to the list is the scanning electron microscope. Besides providing the analytical researcher with excellent information on the structure of metals, plastics, fibers and cell tissues, it is furnishing the layman with a new art form—sharp in-depth photographs of the infinitesimally small.

Procedure Looks Simple

Outwardly, the procedure for inspecting a sample appears simple. The researcher places the specimen — which may range in size from something almost invisible to the naked eye to one inch in length — in a vacuum chamber, activates the scanning electron microscope and settles down to watch the picture tube as a TV fan would watch his favorite program. The specimen can be tilted to permit investigation from a number of angles and the magnification effectively ranges up to about 100,000 times. (Magnifications as high as 255,000 times have been obtained at one prominent medical center.)



A Uranium Alloy (1000 ×)

Carbonized Fabric (100 ×)

The extent of magnification, however, is not as significant as the excellent depth of field picture it provides. Some of the most arresting scenes are seen at relatively low magnifications. A recent example was the moon dust speck—about 0.3 millimeter in size — which was magnified a few hundred times to reveal a human face profile. At 100 magnifications, the layman might say that tin metal powder resembles peanut brittle, that common table sale looks like brook pebbles and that carbonized fibers appears to be a plumber's nightmare. At 1,000X, a certain nickel alloy heated to a high temperature resembles a convention of worms held on a gelatin mattress and a uranium alloy like a world of glass canyons.

Helps in Choices

Y-12 tests with the scanning electron microscope have been concerned primarily with the study of particles, fractography, machining and carbon composites. These tests are conducted by the microscopy group in Development Division's Laboratory Development Department.

The particle studies, for example, revealed which types of metal powders provided by commercial suppliers would be most suitable for certain applications. The close-up, in-depth look revealed which types were too porous for consideration.

The fractography studies are concerned with the structural integrity of specimens after they are subjected to various environmental conditions. The scanning electron microscope is extremely helpful in locating the origin and type of fracture.

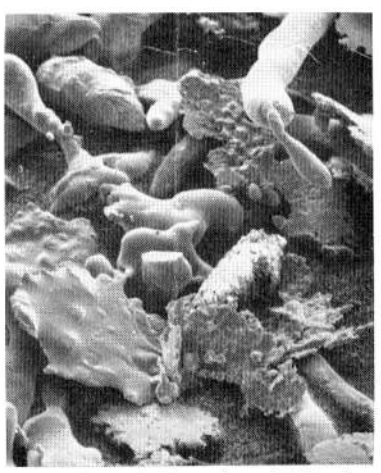
The machining studies involve the close-up inspection of specimens that have been machined by various tools, speeds or techniques. One of the aims is to help tool fabrication engineers to eliminate tool chatter and vibration that result in cutting inaccuracies.

Quick and Effective

The study of carbon composite materials is aimed at finding the best combination of carbon fiber materials for various aerospace, insulation and related applications. The instrument is a quick and effective way to examine various types of composites for fiber placement and voids.

The scanning electron microscope differs from the conventional transmission electron microscope — a standard laboratory tool inthe Oak Ridge plants for several years.

In the transmission electron microscope, a beam of electrons is directed toward an ultra thin specimen. Some of the electrons are absorbed, while others are transmitted through the sample. The transmitted electrons form an image that can be magnified and focused by electron optics. In general, the photographs of these images are two dimensional.



Tin Metal Powder (100×)

The scanning electron microscope, however, operates on a slightly different principle. An electron beam is scanned back and forth over a specimen like a beam on a television screen. This beam penetrates the surface, causing other electrons to be emitted from the specimen. These electrons are collected and displayed on a cathode ray tube, providing an image of the specimen surface. Photographs made of these images resemble "snap-shot" type photographs with a three dimensional quality that can be interpreted more easily because they resemble objects seen with the naked eye.

Turtles Thrive in Pond Water Warmed by Nuclear Reactors

The fabled hare would be hard put these days to keep up with the turtles at the 2500-acre lake known as Par Pond on the site of the Atomic Energy Commission's Savannah River Plant in South Carolina. The rabbit might still be faster but the turtle is gaining in numbers.

Turtles — some 9,000—inhabiting the small lake which is warmed by water flowing from a nearby nuclear production reactor are growing fatter and more plentiful each year, according to Dr. J. Whitfield Gibbons, in charge of "turtle study" for the Savannah River Ecology Laboratory.

One of the by-products of the operation of nuclear reactors is water warmer than normal. Water from adjacent lakes or streams used for cooling purposes gains in temperature as it removes heat from the reactors. The number of these heated bodies of water throughout the country may be expected to increase as more electricity is generated, whether by new plants using nuclear fuel or by additional conventional coal, oil or gas plants which also discharge warm water. Consequently, the research at the Savannah River Plant on the effects of warmed water on animal life is important to such areas as food production and conservation as well as power generation.

Warmed Water Effects

Scientists at the Savannah River Ecology Laboratory, operated by the University of Georgia under contract with the AEC are finding some of the data on warmed water effects in their biological studies in Par Pond.

The warmer water has had no detrimental effects on the turtles, Gibbons reports. "On the contrary, turtles greater than 11 inches in length are not uncommon from the warmed reservoir," he says, whereas the same species —the common pond slider—rarely reaches a length of nine inches in the natural areas under study.

Turtles not only grow bigger but also grow faster in warm water, Gibbons' studies show. Newborn "hard-shells" begin life one inch longer in both the natural area and the heated water. But the warm water fellows soon get ahead of their natural area relatives. Par Pond's turtles often measure four inches long when they're only two years old, while the other group measures less than three inches after three years.

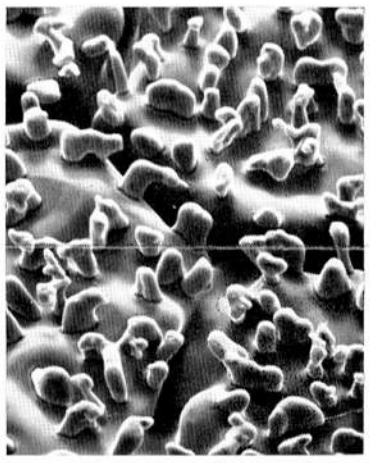
Why do turtles grow faster in warm water? Are they simply happier and more comfortable? Does the warm water increase the amount of food available to them? And why do some turtles prefer clams and insects on their menus while others are strict vegetarians? These and other questions are being answered by Ecology Laboratory scientists with the assistance of radioactive materials.

By "tagging" turtles and their food with tiny amounts of these tracer materials, Gibbons can keep track of his hard-backed family and their eating habits. He knows how far and how fast they travel, which ones are lazy and which industrious.

"Man's existence is structured around animals and plants," Gibbons explains. "Each species affects man either directly or indirectly. The turtle has qualities that can be measured, and in order to be able to manipulate our environment, we have to be able to predict what plants and animals do."

Studies similar to those involving turtles also show that alligators thrive in the warmed waters of Par Pond.

"By learning principles or nature's guidelines about animals, we learn principles that might also be applied to man," says Gibbons.



Nickel Alloy (1000 ×)

Common Table Salt (100 ×)

NEWS

Published Bi-Weekly For The Employees Of UNION CARBIDE CORPORATION

UNION CARBIDE

NUCLEAR DIVISION

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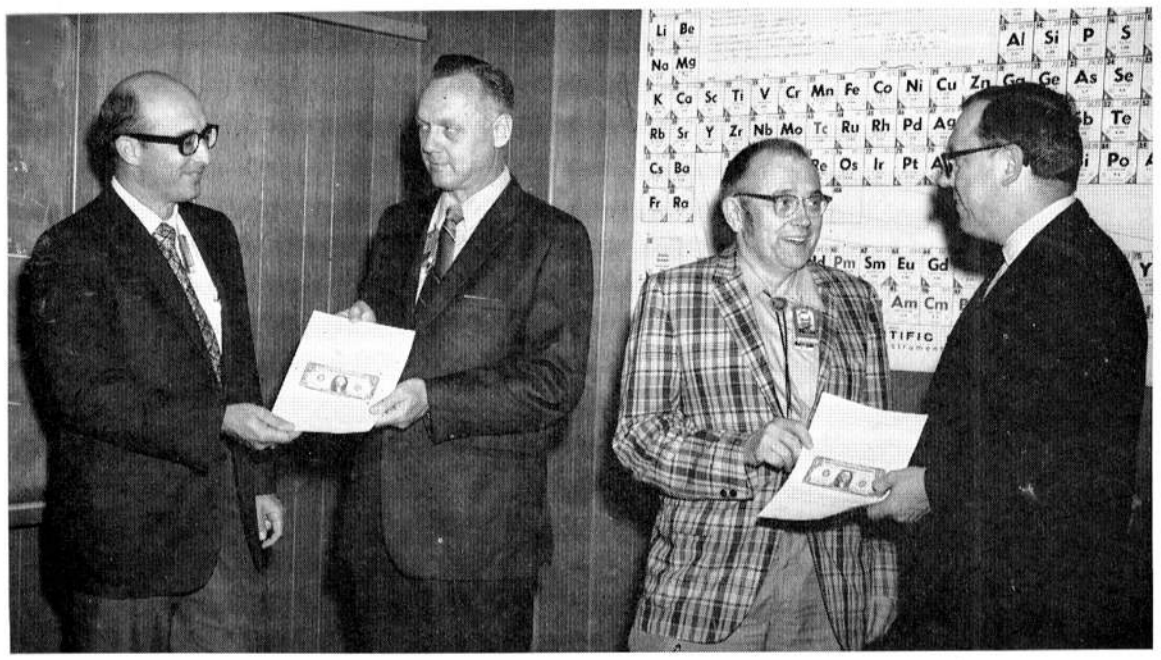
UNION CARBIDE

—Y-12 BULLETIN

Thursday, July 16, 1970



CO-INVENTORS SEEK PATENT—A development 'Porous Microspheroidal Nuclear Fuels Having Internal Porosity and Process for Their Manufacture' has brought about the filing of a patent application in the name of inventors C. R. Schmitt and John M. Googin for the U. S. Government. W. J. Yaggi, superintendent of Development, left, presents Schmitt his $1 letter; and W. J. Wilcox, Jr., right, presents Googin his congratulatory letter. Wilcox is the Nuclear Division's technical director.

Eroy Gunn's Rites Held Here July 9

Utilities Administration records the death of Mr. Eroy H. Gunn, Saturday, July 4, in Oak Ridge.

Mr. Gunn, a native of Tuskegee, Ala., came to Y-12 January 27, 1969. He was a graduate of Oak Ridge High School. He served in the U. S. Army from 1967 until 1968, and was employed by the Oak Ridge Hospital and as a summer employee with the Tennessee Valley Authority, before coming here.

E. H. Gunn

Survivors include his wife, Mrs. Helen Ghoston, employed at ORGDP; a young daughter Tamela; his mother, Mrs. Ocie Lee Gunn, all of 118 Vandalia Rd., Oak Ridge; and his father Jesse D. James, Knoxville.

Services were held Thursday, July 9, at Mt. Zion Baptist Church where Mr. Gunn was a member. Interment followed in Oak Ridge Memorial Park.

Sincere sympathy is extended the Gunn family.

LOST & FOUND

Lost and Found in Y-12 reports several items of value turned in recently. They may be claimed by proper identification at Building 9710-2, telephone numbers 3-5495, or 3-7272.

Both lost and found items are handled through the Guard Department.

NEW BONES

Carbon or graphite composites may be used as implant materials in humans, according to the National Aeronautics and Space Administration. NASA points out that a number of high-purity, high-strength composites of these materials appear compatable with body fluids and tissues. Example: for bone replacement, now using stainless steel which, in time, degrades from chemical and galvanic corrosion.

Otis Rackley

Rackley Becomes Young 'Old-Timer'

When Otis Rackley celebrated his 25th anniversary with Union Carbide last month, he probably became the 'youngest' old-timer in Y-12! The equipment cleaning foreman in Fabrication hired in here June 13, 1945, shortly after his graduation from Dalton High School.

Rackley's wife Ann is in Y-12's Security Department. They live at Route 4, Wilde Acres, Clinton. There he likes to work in the lawn and around the house. His main avocation, however, is bowling, and he has served on the same team in the Classic League for many years.

Their daughter Helen Thomas Dykes lives in Kingsport with her husband Tommy and two children.

SAFETY SCOREBOARD

The Y-12 Plant Has Operated

194 Days Or

5,849,000 Man-Hours

(Unofficial Estimate)

Through July 12

Without A Disabling Injury

SAFETY AT HOME, AT WORK, AT PLAY

Truck Mishaps Could Have Been Much Worse

In early June, two potentially serious vehicle accidents occurred in Y-12. The circumstances surrounding both accidents were almost identical, and with slightly altered conditions could have resulted in fatal consequences.

In each accident, the trucks involved had "push button" gears. Both were parked on a downhill grade, and apparently the hand brakes were not set on either vehicle at parking. One truck rolled down into a parking lot and struck another vehicle; the other rolled down hill and struck a concrete post.

Fortunately, no personal injuries were sustained in either accident. However, property damage to both vehicles was extensive.

It is imperative that drivers set the hand brake on these 1961 and 1962 pick-ups. The gears were not designed to hold these vehicles. Obviously, setting the hand brakes would have prevented both accidents.

Hand brakes should be set properly on all parked vehicles to comply with safety standards in the plant. With the 1961 and 1962 models it is a "MUST" if similar accidents are to be avoided.

U.S.S.R. JUST LIKE U.S.

A Russian editor and an American editor met at a social gathering in Berlin.

"We have true democracy under our glorious leaders," boasted the Russian.

"But I can't understand your brand of democracy," argued the American "In my country I can write a story for my newspaper criticizing President Nixon and the government. Nothing will happen to me, for I have the right of free speech."

"In the U.S.S.R. we have also the right of free speech," agreed the Russian. "I, too, can write a story for my newspaper criticizing President Nixon and your government. Nothing will happen to me."

Moretz, Morgan, Ross Are Promoted Foremen in Maintenance Division

The Maintenance Department has announced three promotions, effective July 1, making maintenance foremen of the following: Ralph M. Moretz, Jr., and James L. Morgan, Jr., of Process Maintenance; and J. P. Ross, Jr., Area Five Maintenance.

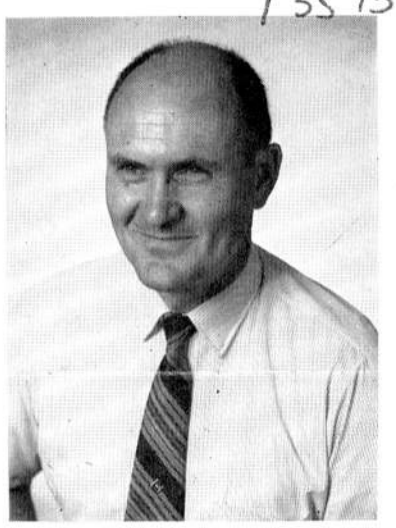
Ralph Moretz, Jr.

Ralph M. Moretz

A native of Boone, N. C., Moretz came to Y-12 November 29, 1954, after working with the Edenfield Electric Company from 1953 until 1954. He was with the Central Coal Co., New Haven, W. Va. from 1950 until 1952, and worked with the Home Electrical Supplies and the Fix-It Shop, both in Boone, from 1947 until 1950.

A veteran of the U. S. Navy (from 1945-47), he is still in the reserve Seabees. A member of the Instrument Society of America, Moretz is also active in the National Rifle Association of America and the Optimist Club.

He lives with his family (Mrs. Moretz is the former Mary Bingham) at Route 2, Powell. They have three daughters, Mrs. Donna Flood, stationed with her husband in Norfolk, Va., Billie and Denise at home.



James L. Morgan, Jr.

James L. Morgan, Jr.

Born in Arnoldsville, Ga., Morgan came to Y-12 August 31, 1953. He served in the U. S. Navy from 1948 until 1950, and worked with the Tennessee Products and Chemical Corp., Chattanooga, before coming here.

Mrs. Morgan is the former Mary French. They live at Route 3, Clinton, and have one son James Russell.

The Morgans have two greenhouses at home where they grow orchids, a hobby that grew into a near-business.

J. P. Ross, Jr.

J. P. Ross, Jr.

A native of Harriman, Ross came to Y-12 November 6, 1950. He worked with the Acme Drug Company in Harriman from 1941 until 1943. In the early war years he worked in Y-12, and worked in sales with Radio Station WIBK, Knoxville.

Mrs. Ross, also a Y-12er, is the former Helen Livingston. The couple lives on Woolsey Rd., Harriman. They have a daughter Cindy.

Atom 'Fingerprints' Pre-Historic Pottery

A movie outlining the use of nuclear techniques to analyze ancient pottery has been added to the collection at the Atomic Energy Commission's Film Library here. The 20-minute film, "Nuclear Fingerprinting of Ancient Pottery," was produced by the AEC's Lawrence Radiation Laboratory in California.

"Fingerprinting," the film explains, is achieved by removing a small sample of the pottery item and irradiating the sample inside a nuclear reactor to produce radioactive isotopes. The isotopes emit different amounts and intensities of radiation, which are analyzed by electronic equipment.

This nuclear innovation gives archeologists an accurate means of pinpointing the origins of ancient artifacts.

The movie may be borrowed from the AEC's Film Library.

Junk Pile Planet

Our planet could become one of the universe's biggest junk heaps. In 1969, Americans dumped out 26 billion bottles and jars, 48 billion metal cans and 65 billion metal and plastic caps from these bottles and cans. They also discarded 36 billion tons of paper. Our national solid waste now runs to better than six pounds of garbag per day for every man, woman and child alive.

In New York City, for example, one year's solid waste would fill Yankee Stadium and form a mountain a mile high. In 1969, New York paid more than $150 million for the removal of six million tons of refuse, with more than 14,000 workers on the city's sanitation force.

Jim Vance and Benny Crass Capture Southwest Point Golf Tournament

June 27's big golf winners included Benny Crass and Jim Vance, both scoring even 74's on the rolling greens at Southwest Point, alongside beautiful Watts Bar Lake.

Among first division winners, in scratch carding, were George Zurawick, 76; Bill Mee, 77; and W. B. Goss, 79 . . . among the 181 golfers that turned up for play.

Handicap winners saw Vance with a 68 (he took handicap honors to afford him as many golf balls as possible in winning); Bill Hamill, George Heins and Bruce Hogg, all with 70.

Bill Ladd scored an even dozen pars; while Jim George and John Baker parred 11.

SECOND DIVISION

John Ball posted honors in the second division, scoring a seven-over score of 79. Red Leach fired an 84; Bill Sise, 85; and Bill Hoppe, an 87.

Handicap winners in the next-to-best category saw E. W. Smith with a 72; Herbert Tabor, 74; Frank Tiller, 75; and Kyle Johnson and E. V. Hawk, each with 76.

Mont Kendrick scored a total of seven pars; W. L. Simmons, Carl Redding, Ed Sise, R. B. Strickland, Dan Culberson, J. A. Basford all tallied six.

THIRD DIVISION

W. A. Rutherford rallied to take Division III honors, carding an 82. He was followed by Fred Wetzel, 85; Dan Rowan, 87; and George Peterson with an 88.

Among handicap scores were B. D. McElory and Conrad Strike, 70 . . . tied for first honors. Bob Bowers came in with 71 and Harold Bell scored 72.

J. D. Watkins parred seven holes; Ray Ellis and E. K. Cottongin counted six.

FOURTH DIVISION

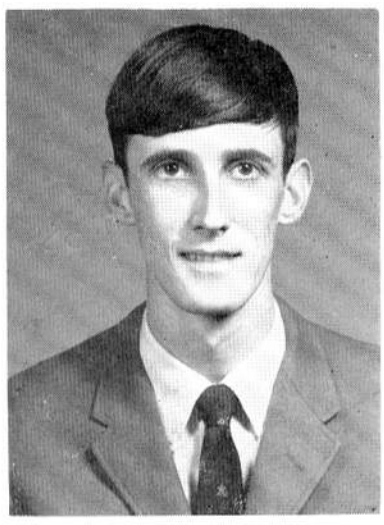
Among the high handicap golfers and beginners it was Joe Sherrod, 88; George Buxton, 92; Tom Compton and Fred Baker, 99.

Handicap honors were gleaned by Wendell Jones, 71; Sandy Quinn and B. F. Hendrickson, 74; K. A. Maulden, 75.

W. L. Goodwin counted four pars; Dick Huber, Paul Trebilcox and J. S. McMurray had three.

July's scene is set at Whittle Springs, Saturday, July 25. An application for tee-off times appeared in the July 2 issue of the Y-12 Bulletin. These applications are due in at the Recreation Office next Wednesday at 4:30 p.m., July 22. Drawings will take place the next morning, and foursome leaders will be called, posting them with the exact tee-off time.

Jeffers Graduates At UT Pharmacy



Douglas R. Jeffers

Research Services' H. Jeffers has sound reasons for pride these days. His son Douglas R. Jeffers was a June graduate from The University of Tennessee's School of Pharmacy.

Jeffers graduated from Oliver Springs High School in the class of 1964, and has been working at the Acme Drug Company, Harriman.

The Jeffers live at Route 3, Oliver Springs.

Recreation calendar

Sunday, July 19

SKEET TOURNAMENT: 1 p.m., Oak Ridge Sportsmen's Association.

WATERMELON SLICING: 3 p.m. Sponsored by E, F, G, H and J Shifts. All Y-12ers and families invited. Clark Center Recreation Park.

Monday, July 20
27

SOFTBALL LEAGUE: 6:15, 7:30, 8:45 p.m. Pinewood Field.

Tuesday, July 21
28

GOLF: Melton Hill League, after work.

GOLF: South Hills League, after work.

SOFTBALL LEAGUE: 6:15, 7:30, 8:45 p.m. Pinewood Field.

PISTOL LEAGUE: 6 p.m. Oak Ridge Sportsmen's Association.

Thursday, July 23
30

SOFTBALL LEAGUE: 6:15, 7:30, 8:45 p.m. Pinewood Field.

GOLF: Southwest Point League, after work.

Saturday, July 25

GOLF TOURNAMENT: Whittle Springs Golf Course, Knoxville. Deadline for entering Wednesday, 4:30 p.m. July 22.

Mook, Wyatt Lead Table Tennis Men

Herb Mook and Loyd Wyatt lead the Summer Table Tennis League, after two weeks of action. They took sweeping wins last week from Al King and Joe Rich respectively.

Jerry Keyes downed Gordon Brewer for the full count, and wrested two games from Roy Huddleston.

League standings follow:

Team	W	L
Herb Mook, X-10	6	0
Loyd Wyatt, Y-12	6	0
Jerry Keyes, Y-12	5	1
Roy Huddleston, Y-12	4	2
Jerry Goldstein, X-10	3	3
Joe Rich, X-10	0	6
Al King, Y-12	0	6
Gordon Brewer, Y-12	0	6

Loupe-Rutherford Take South Hills Golf Lead

Low scorers in the South Hills Golf League the first week of July saw Ed Sise card a 40 . . . Bill Sise and Lynn Cabe each fired a 35 handicap score.

The week of July 7 featured Jim Loupe scoring a 39; while F. B. Parrott turned in a 34 handicap score. Parrott-Parker combined scores for a 69 handicap.

League standings follow:

Team	W	L
Loupe-Rutherford	31	11
Parrott-Parker	29	13
Gallman-White	27	15
Sise-Dean	25	17
Joest-Pappas	23	19
Sewell-Collins	23	19
Ellis-Riding	22	20
Oakwood-Leete	20	22
Jones-Cogswell	19	23
Bell-Gresham	14	28
Huber-Parker	10	32
Cabe-Cabe	9	33

Mid-July finds more Y-12ers, marking important dates with Union Carbide Corporation. Congratulations.

25 YEARS

James R. Aytes, H-2 and F-Area Shops, July 17.

Paul Overton, Mechanical Inspection, July 18.

Lawrence E. Christopher, Special Services, July 20.

Warren F. Cartwright, 9766 Machine Shop, July 20.

Kenneth L. Honeycutt, H-1 Foundry, July 24.

Donald I. Davis, Guard Department, July 24.

Charles R. Connatser, Research Services, July 25.

John F. Myers, Buildings, Grounds and Maintenance Shops, July 28.

20 YEARS

Edwin R. Pulley, Data Processing, July 19.

William Penn, Electrical Engineering, July 24.

15 YEARS

Peggy K. Silver, Beta Two Chemistry, July 18.

Hubert W. Hensley Jr., H-2 and F-Area Shops, July 27.

James Bradford, Buildings, Grounds and Maintenance Shops, July 27.

10 YEARS

Irene K. Carmack, Beta Two Shop, July 18.

Wiliam C. McWhorter, Materials Engineering Development, July 18.

John C. Poland, Buildings, Grounds and Maintenance Shops, July 20.

Arnold R. Godsey, Facilities, Engineering, July 25.

Roy C. Scates, Dimensional Inspection, July 25.

Hubert C. Rackley, Sr., Buildings, Grounds and Maintenance Shops, July 25.

Correction: In this column in the last issue of the Y-12 Bulletin the 20 years' company service men were crossed with the 25 years company service Y-12ers. **Mabel Tyer, Roberts S. Burdette, Arnold K. Self** and **Willie E. Cross** celebrated their silver anniversary with Union Carbide. **James H. Keye, Dewey E. Floyd, Avis Collins, Arburth M. Maples** and **Harvey C. Hankins, Jr.** observed their 20th anniversary.

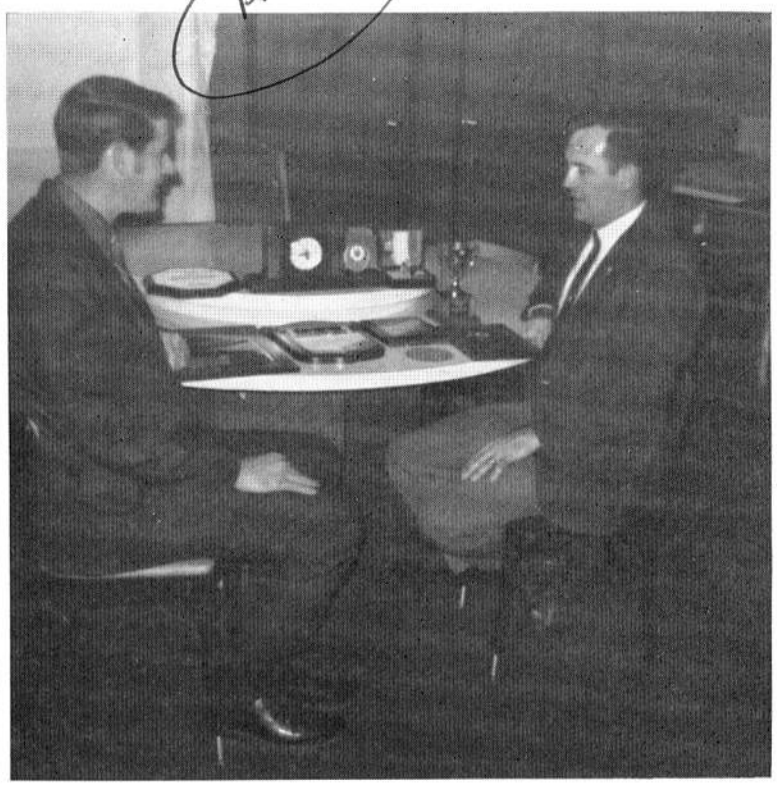
Riders wanted from the Fountain City area, Knoxville, to all Portals, straight day. F. E. Clevenger, plant phone 3-5981, home phone Knoxville 522-7393.

Ride wanted from Byington, Beaver Ridge Road, Karns Community, to East Portal, straight day. Helen Shersky, plant phone 3-7241, home phone Knoxville 584-3210.

Ride wanted from West Lincoln area, Oak Ridge, to East Portal, straight day. Gary Wisman, plant phone 3-5096, home phone Oak Ridge 482-4874.

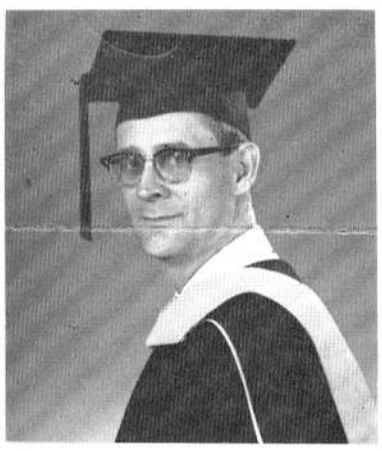
Ride wanted from South Clinton (near South Pole) to Central Portal, straight day. Steve Turnbill, plant phone 3-5321, home phone Clinton 457-2176.

Ride or riders wanted, or will join car pool from Cherry Street, Knoxville, to Central or West Portal, H Shift. H. A. Hanna, plant phone 3-5283, home phone Knoxville 522-0587.



OPTIMIST AWARDS—James Disney and Larry Egner, left to right, view the various awards won by the Clinton Optimist Club. Disney was recently named Distinguished Lieutenant Governor in the Tennessee District, and Egner is Distinguished President of the Clinton Club.

Paul Long Receives MS Degree at UT



Paul L. Long, Physical Testing, received his master of science degree from The University of Tennessee, June 10.

Long's education has been a continuous one covering several areas of interest. He has been taking graduate courses at UT since 1951. He received his B.S. degree in physics from Tennessee Technological University in 1950.

Other interests include painting and writing. A graduate of the Famous Artists School, Long did feature and editorial writing during his undergraduate years. His most recent writing was a book on the history of his wife's family. Last year he wrote several historical articles on the early days of Monroe County, his native area. These articles were published in the **Madisonville Democrat.**

'Melon Slicing

E, F, G, H, and J-men are planning a big watermelon slicing to fit in with the season Sunday, July 19.

There'll be enough big, juicy, sweet watermelons for all Y-12 families wishing to come (the head of the household is requested to bring along his blue badge as identification.)

It's at 3 p.m. Sunday at the Clark Center Recreation Park, across the ridge.

Y'all come.

Optimists Choose Disney for Honor

James Disney, Health Physics, was recently named Distinguished Lieutenant Governor in the Tennessee District of Optimist International.

He was lieutenant governor of Zone 9 which is comprised of clubs in the Claxton, Clinton, Harrogate, Jellico, Tazewell, Norris, Oak Ridge and Rutledge areas.

Larry Egner is president of the Clinton Optimists who finished third in state competition recently. Egner's wife Louise is in Y-12's Shift Superintendent's Division. He is employed at Oak Ridge National Laboratory.

Alvey-Dorr Commanding Slim Melton Hill Lead

Alvey-Dorr stand atop the Melton Hill Golf Leaguers after last week's action, where they downed Sherrod-Reed for the full count.

The week before that saw some fancy shooting, however, when Jim George birdied four straight holes to take a low 33; John Baker shot a 34. Harold Alvey eagled the 9th hole.

League standings follow:

Alvey-Dorr	31	11
Rogers-Verner	30	12
McDonald-Green	27	15
Wetzel-Hatmaker	26	16
Babb-Baker	24	18
Strike-George	24	18
Crowder-Buxton	21	21
Reed-J. Sherrod	19	23
Grubb-Wright	19	23
W. Sherrod-Wyrick	19	23
McElroy-Riggs	15	27
Waldrop-Cloyd	15	27
Nixdorf-Holdaway	15	27
D. Thomason-R. Thomason	9	33

Jones - Morgan Continue SW Point Golf Leading

The Jones-Morgan pair still lead the Southwest Point Golf League, after five matches in the eight-team league.

In the June 30 matches, Bill Mee fired a 39 scratch score; R. Roberts a 34 handicap tally.

Last week it was O. K. Bush, 32; W. E. Briscoe, 33; C. A. Boyd, 34 all handicap scores.

League standings follow:

Team	W	L
Jones-Morgan	25	5
Henderson-Stanton	23	7
Bolt-Pelfrey	23	7
Stark-Wiley	16	14
Boyd-Bush	11	19
Mee-Wright	10	20
Briscoe-Williams	8	22
Plemons-Roberts	4	26

THE CARBIDE COURIER

Thursday, July 16, 1970

REN

Many Efforts Contribute To Hearing Conservation

One of the lesser known employee benefits is the Hearing Conservation Program. Although the program has been in existence for a number of years, several Health and Safety Bulletins have recently been issued to acquaint employees with the basic features of the program.

The first step in the establishment of a hearing conservation program is to determine the sound level in the various work environments in the plant. The findings are then compared to standard permissible noise exposure tables.

Whenever it is feasible to do so, noise levels are reduced to acceptable limits by engineering methods. If it is not feasible to reduce the noise level to within permissible levels, personnel protective devices are provided. The user or wearer of ear protectors are instructed as to their proper use.

Several good devices for hearing protection are available from K-25 stores — earmuff-type hearing protectors, ear plugs, and anti-noise "stopples" of moldable wax and cotton.

In use for the first time at K-25, the above sign will designate work areas where noise exposure may exceed specified levels. The sign is a warning that a noise condition may be encountered within the area posted. Since the noise problem may be intermittent or the intensity levels may vary, the sign prescribes that those who enter the area should contact the supervisor for instructions.

Hearing Tests Given

All employees are given audiograms by a technician in the Medical Department. These audiograms are reviewed by a staff physician and appropriate recall examinations are scheduled as deemed necessary.

Ear protectors should be regarded in the same light as eye protection and other personal protective equipment. Just as goggles enable employees to work in the midst of unavoidable eye hazards with safety, so ear protectors enable men to work in noisy areas without endangering their hearing.

Lab Notes

Mr. and Mrs. D. P. Murphy are the parents of a son, Michael Patrick, who arrived at the Oak Ridge Hospital on June 16. (Weight—6 lb. 6 oz.). Mrs. Murphy is the former Edith Kimmerly who worked with J. E. Bradshaw, Finance and Materials Division. Edith is the daughter of E. Y. Kimmerly.

* * *

Gerald Addington of the Chemical Analysis Department is the father of a 7 lb.-4 oz. daughter, Erika Denise, born on June 27.

* * *

Barbara Luzader, daughter of W. B. Luzader, Chemical Analysis, a 1970 graduate of Oak Ridge High School, has been accepted for training as a dental hygienist at East Tennessee State University. She was among 40 selected from a total of 250 applicants. She is presently working as a dental assistant in Oak Ridge.

ATTENDS GAO MEETING—J. T. Reeve, manager of auditing, Nuclear Division, recently attended a General Accounting Office Conference. Elmer B. Staats, Comptroller General of the United States, addressed the two-day session. Seated from left, are Reeve, R. H. Loechler, General Tire & Rubber Co.; E. H. Morse, Jr., and W. H. Dittenhofer, both of GAO. Standing are J. R. Flood, Stouffer Chemical; Gerson Adler, American Greeting Corp.; and John Ballard, International Harvester Co.

K-25 Tennis Tournament Attracts 24 Tennis Men

First round matches in the K-25 tennis tournament are being played this week. Twenty-four employees are signed up for the tournament. A consolation flight wil be drawn up following the completion of first round matches for the losers of first round play.

Alert today—alive tomorrow.

Reeve Hears Comptroller General In Washington Auditors' Meeting

John T. Reeve, manager of auditing for the Nuclear Division, recently attended an internal auditors' conference in Washington, D.C. Elmer B. Staats, Comptroller General of the United States, addressed the meeting.

The comptroller general talked with a special six-member committee of the internal auditor's headed by R. H. Loechler, corporate general auditor, General Tire and Rubber Co.

This group attended a two-day meeting at GAO with the Eight-Agency Audit Standards Working Group, representing federal agencies, organized in February under GAO leadership. The mission of the group is to develop a common body of audit standards for the guidance of federal executive agencies and state and local governments or independent public accountants in the audit of federal assistance programs involving grants-in-aid to state and local governments.

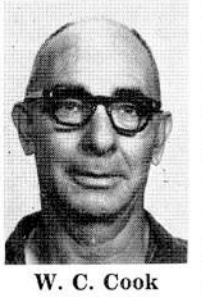
The objective of these audits is to determine the validity of the financial statements, including their supporting transactions. The audits also seek to ascertain whether the programs are achieving the results intended by Congress in enacting the legislation, and if operational controls are being used to determine the achievement of results. It is expected that in some cases audit teams will be augmented by specialists to determine whether the programs really are working.

The meeting was moderated by Mortimer A. Dittenhofer, assistant director of the GAO's office of policy and special studies.

The Institute of Internal Auditors is one of several organizations which will review the Work Groups products and recommend modifications and improvements in proposed audit standards to the comptroller general. It is anticipated that this will lead toward formulation of a common body of audit standards for the guidance of all government agencies.

July Retiree

William C. Cook, carpenter in the Buildings and Grounds Department, elected early retirement effective July 3. His continuous service date was August 24, 1945. Before coming with us, Cook worked as a carpenter and as a machinist on construction projects. He served in the U. S. Navy from October, 1942, to May, 1944.



W. C. Cook

Cook is a native of Blairsville, Ga., and attended public schools in Morristown. He is married to the former Hazel Mae McDowell. The Cooks live at 206 Woodland Drive, Kingston.

FINISH AMA LEADERSHIP COURSE—This is the latest group completing the American Management Leadership Course. Left to right, seated, are Dan Johnson, course discussion leader; C. L. Buskirk, J. C. Murray, E. E. Ladd, E. J. Asbury, S. E. Groothuis, W. J. Leggins, and Louis Alley. Standing are A. H. Rice, Dr. L. F. Lockett, lecturer for the final session; F. W. Hensley, Floyd Hipshire, Jr.; Joe McMahan, Benjamin F. Crump, Jr.; J. A. Smith, A. J. Krusen, R. M. Delozier, R. D. Newman, James P. Deaton, Ted H. Davis, C. R. Gee, Charlie Frye and Bob Orrin. Not pictured are John R. Butler, Oak Ridge Associated Universities, and W. E. Dunlap.

Melton Hill Next

Boatwright Sub-Pars Wallace Hills Greens to Win K-25's Third Round

Alvin Boatwright shot a sub-par 34, 34-68 on the Wallace Hills Golf Course on June 27 to win medalist honors in the third K-25 tournament of the season. Sy Kopplin won handicap honors in the first division with a net score of 66.

Glenn Brooks and Walt Wendolkowski shared division scratch honors, both shot 87's. David O'Kain had the best handicap score in this division with a net 73.

Ralph Armstrong's 83 was the lowest scratch score in the third division. Lee Bradley ended up with a net 61, thanks to a high handicap established in his first tournament at Gatlinburg.

Here are all the winners:

DIVISION I

Front Nine		Back Nine	
A. S. Boatwright	33	A. S. Boatwright	33
F. W. Kopplin	33	F. W. Kopplin	33
W. L. McMahan	33	John Boggs	35
Eric Warming	33	C. S. Patton	36
John Boggs	34	P. S. Cates	37
Jim Shoemaker	35	W. L. McMahan	37
A. H. Marshall	36	A. H. Marshall	38
Ed Bordes	36	Jim Mooney	38
C. F. Hale	36	Eric Warming	38
John Battle	37	H. A. Creswell	39
E. V. Bogle	37	A. F. Poche	39
C. G. Henley	37	G. B. Boroughs	39
C. E. Mathis	37	J. C. Horton	39
Bob Teague	37	C. E. Mathis	39
G. B. Boroughs	37		

No. 6 Hole-In-One

Willard Moore ..... 7 ft. 1 in.
Ed Bordes ..... 9 ft. 4 in.

No. 14 Hole-In-One

Wes Hightower ..... 13 ft.
Alvin Boatwright ..... 25 ft. 9 in.

DIVISION II

Front Nine		Back Nine	
D. L. Townsend	35	G. B. Brooks	31
H. R. Kitchen	36	D. U. O'Kain	35
Ted McKenzie	36	Joe Tuggle	35
E. R. Brewster	37	John Hill	37
R. L. Green	37	A. L. Joiner	37
S. B. Harris	37	W. C. Myers	37
Paul Haile	37	C. E. Nunley	37
Bob Nier	37	D. H. Zim'man	37
C. E. Nunley	37	A. J. Kessing	38
E. T. Strunk	37	Ted McKenzie	38
Joe Bender	37	Bob Napier	38
W. Wendol'ski	37	Bob Nier	38
		W. Wendol'ski	38

No. 6 Hole-In-One

Joe Tuggle ..... 17 ft. 1 in.
Cliff Nunley ..... 19 ft. 1 in.

No. 14 Hole-In-One

Glenn Brooks ..... 6 ft. 3 in.
Bob Greer ..... 14 ft. 1 in.

DIVISION III

Front Nine		Back Nine	
John Cobb	31	Lee Bradley	28
R. M. Armstrong	32	R. M. Armstrong	29
Lee Bradley	33	John Goss	31
Jack Mills	33	Jerry Malling	32
B. K. White	34	John Cobb	33
Bill Gatewood	35	Bill Gatewood	33
R. L. Higgins	35	Henry King	33
Henry King	35	George Davis	34
Jerry Malling	36	J. K. Jones	35
G. H. Davis	37	E. D. Legg	36
John Goss	37	Jack Mills	36
W. W. Wise, Jr.	37		

No. 6 Hole-In-One

Loy Sipe ..... 15 ft. 8 in.
Jim Davis ..... 16 ft. 4 in.

No. 14 Hole-In-One

George Davis ..... 31 ft. 7 in.

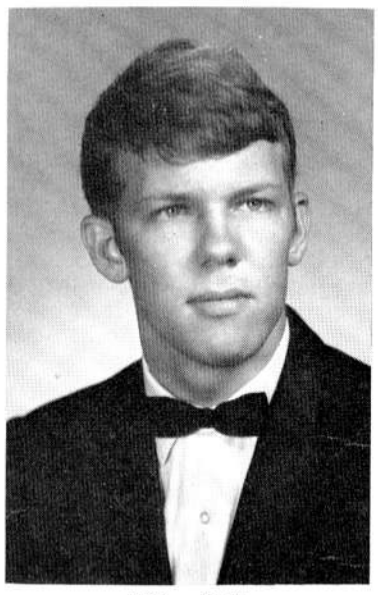
Carson Chosen As Accountants' Head

Donald R. Carson

Donald R. Carson, a member of Operations Planning Department of the Operations Division, has been elected President of the Knoxville Chapter of the Tennessee Association of Public Accountants. He was installed at a banquet during the annual convention of the Association in Memphis, June 24-26.

Carson has been a public accountant licensed by the Tennessee State Board of Accountancy for the last two years, and served as second vice president of the Knoxville Chapter for the past year. He lives at 332 East Fairview Road, Oak Ridge.

Lyell Self's Son Wins Honors at Lenoir City



Mike Self

The many friends of Lyell Self, who worked in the Sheet Metal Shop until his death several years ago, will be pleased to know of the numerous honors bestowed upon his son Mike as he graduated from Lenoir City High School this year.

Mike Self was the recipient of the coveted Cecil Thomas "All Sports" trophy for his participation in football, basketball, and baseball. He also received the Albert W. Hartsook Award which is presented to the graduating senior boy with the most extra-curricular activities, and the Balfour Award. Mike served as president of his senior class this year.

Some Safe Boating Gear Is Required by Statute

Going boating without the proper equipment isn't only foolish—it's also against the law. The Tennessee Boating Safety Advisory Board points out than on Tennessee waters, there must be a life-saving device for everyone aboard a pleasure craft. Crafts up to 16 feet operated on Tennessee waters must carry proper lights and a fire extinguisher, if of closed construction; crafts from 16 to 26 feet long must carry in addition a hand whistle or horn audible for at least one-half mile. Larger pleasure crafts, up to 65 feet long, require a hand or power operated whistle audible at least one-mile, and a bell.

Other items of equipment aren't required, but common sense dictates that you carry them: anchor, line, paddle, first aid kit, flashlight, fenders, tool kit, extra can of fuel, compass and distress flares.

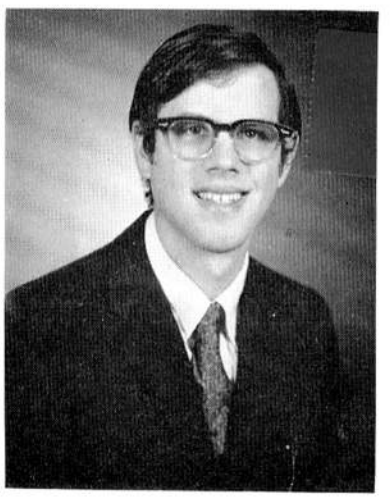
SAFETY SCOREBOARD

OUR PLANT
Has Operated
406,000 Safe Hours
Through July 10
Since last disabling injury on June 11

Congratulations to Our College Graduates

VIVIAN N. BEASON, daughter of W. W. Beason, Operations Division, received a B.S. degree in nursing from the UT College of Nursing in Memphis. She will enter the U. S. Navy Nurse Corps.

SUSAN M. BLAIR, daughter of J. R. Blair, Operations Division, received a B.S. degree with majors in German and anthropology from UT.

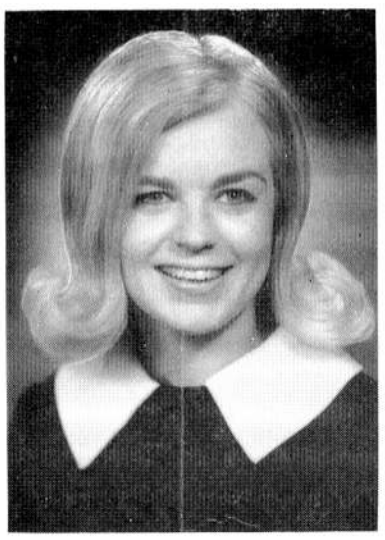


ALAN H. LANDAY, son of Nate Landay, Fabrication and Maintenance Division, graduated magna cum laude from Rollins College, Winter Park, Fla., with a B.A. degree in physics and mathematics.

THERESA GAIL NORTHCUTT, daughter of W. T. Northcutt, Jr., Operations Division, received a B.S. degree with highest honors from UT. She was elected to membership in Phi Kappa Phi society and to Pi Lambda Theta, the national honor and professional association for women in education.

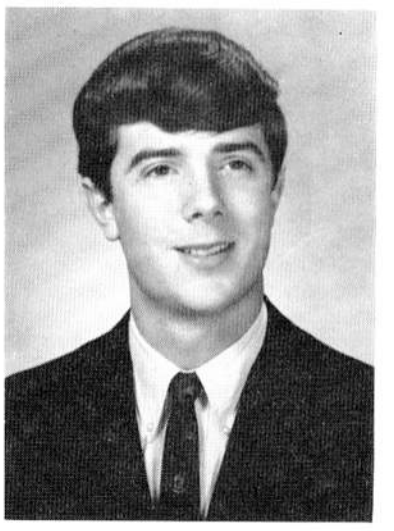
DAVID RINEHART, son of Oral Rinehart, General Accounting and Finance, received a B.A. degree with an English major from Emory University. He made the Dean's List in his last quarter at Emory with a 3.67 average.

SUSAN SIPE, daughter of Loy Sipe, Safety and Health Physics, received a B.S. degree in elementary education from UT.



BECKYANNE STUDINGER, daughter of L. A. Studinger, Fabrication and Maintenance, received a B.S. degree in education from the University of Kentucky.

BETTY WHITE, daughter of Clifford White, Fabrication and Maintenance, received a B.S. degree in music education from Knoxville College. She will teach in the Atlanta public school system this fall. Betty is a member of Zeta Phi Beta sorority.



DAVID THOMAS ZAVA, son of T. E. Zava, Laboratory Division, graduated from Carson-Newman College receiving a B.S. degree. He has a biology major with a minor in chemistry.

Ride wanted from top of California to Portal 5, 8:00 to 4:30. Mike Mahoney, phone 3-3795; home 482-4595.

Next Tournament

The next K-25 tournament will be held at the Melton Hill Golf and Country Club, near South Clinton, on Saturday, July 25.

Starting times may be obtained from the Recreation Office on Monday, July 20.

POT HOLE PREVENTER

Plastics may one day help to prevent potholes in highways, which are costly to motorists and taxpayers alike. Potholes are caused primarily by water under the surface of the road freezing and expanding during cold weather. Research indicates that when small amounts of a new plastic developed from cotton residue, a cellulosic waste, are added to roadbed materials they are waterproofed and stabilized. Result: No water—no freezing—no potholes.

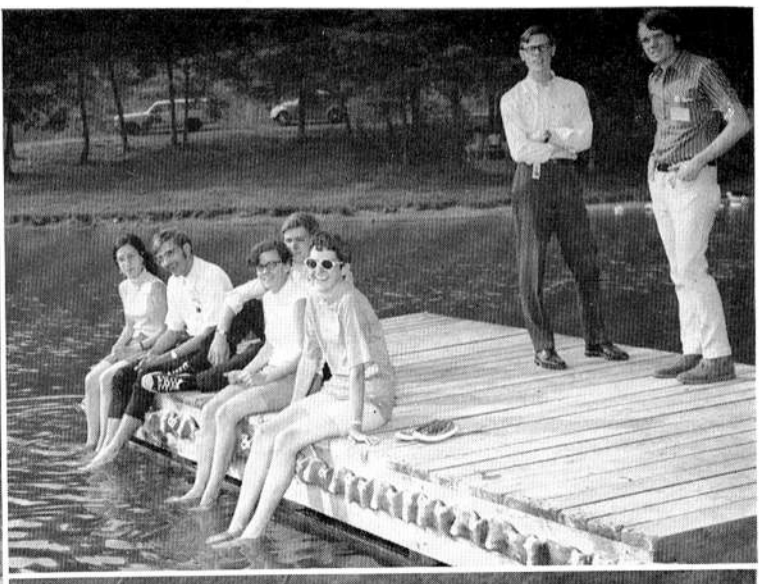
Better arrive late—than never.

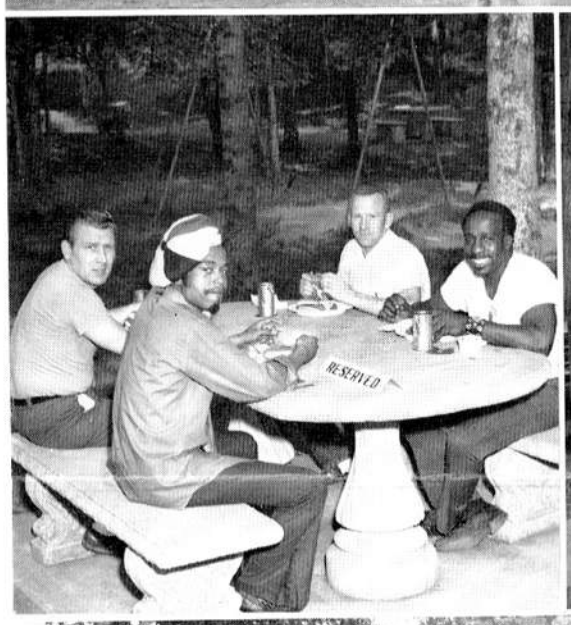
Frye Is Triple Winner In Ridge's Open Tennis

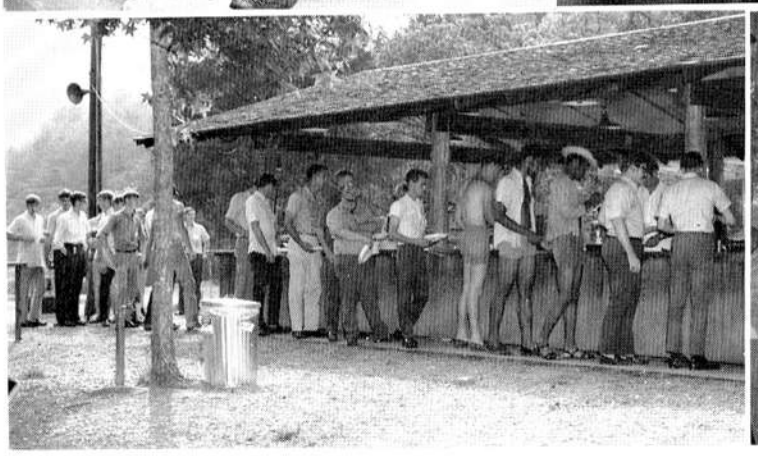
Charlie Frye, Engineering Division, emerged a triple winner in the Blacksher Open tennis tournament completed the last of June in Oak Ridge. Frye defeated Jim Carter in the men's singles 4-6, 6-2, 6-4. John Murphy teamed with Frye to defeat Frank Kam and Carter 3-6, 6-1, 6-2 for the men's doubles title, and Charlotte Cox and Frye beat Gerry Kam and Carter 7-5, 6-3 in mixed doubles.

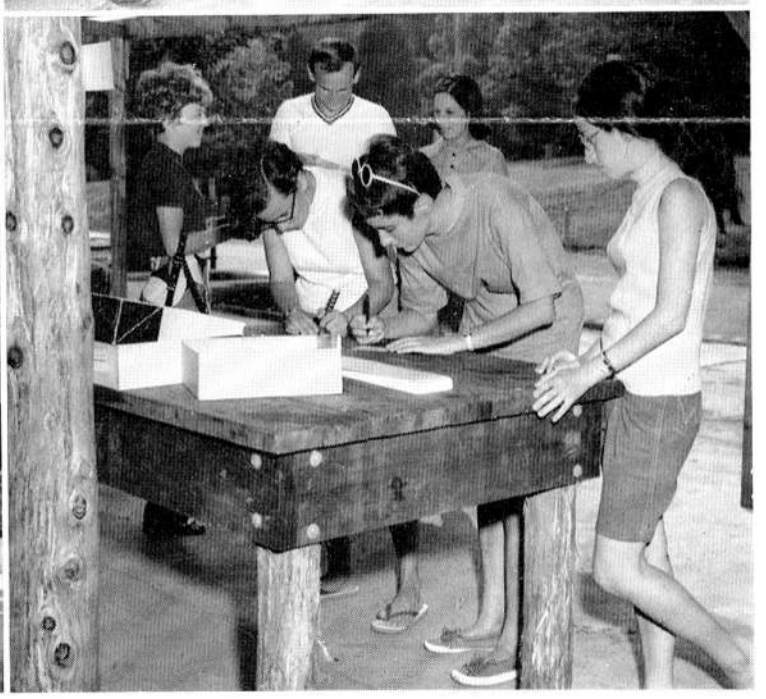
THE CARBIDE COURIER
Published Biweekly
Editor ..... H. J. Mayberry
K-1002 Building, Tel. 3-3097







SUMMER PARTICIPANTS PICNIC—An annual affair, the summer get-acquainted picnic was held recently at the Clark Center Recreation Park. All summer participants, students, co-ops, interns, trainees, Youth Opportunity Program participants, Training and Technology project students, from the three installations here, the Atomic Energy Commission, and Oak Ridge Associated Universities, attended the chicken, barbecue supper. Activities included swimming, softball, volleyball, basketball, sun-bathing and just loafing, as well as eating.

Eagles, Snakes and Colts Share Softball League Lead

The "big three" in Softball fell within the last week or two, making the league race a little more interesting. Two Y-12 teams and a K-25 team are up there among the laurel-wearing players.

Action began June 29 with the Bat Boys putting the Buccaneers down 8 to 5. Don Nikirk nailed the only homer of the game.

The Colts, thanks to a homer by Jim Shoemaker, conquered the All Stars 9 to 3.

The Snakes kept alive league hopes by downing the NC Squad 17 to 6. Horace Moorman proved the big hero with a homer and a triple to his credit.

Raiders Win Big

On the last day of June the Raiders ran the Knockers down 17 to 2. Archie Wilkey, Knockers, killed one in the weeds; Bill Thompson did likewise for the winners.

The Colts kept their slate rather clean with an 8 to 5 victory over the Gashouse Gang. Jerry Howard, Sam Duncan, and Jim Treadwell gained four-baggers for the victors.

The K-25 Devils downed the Buccaneers 13 to 8. Steve Dykes homered, as teammate Leroy Thomas slammed two.

Eagles Stay Alive

July 1 opened play with the Eagles over the fence with the Bat Boys 21 to 10. The Eagles' Greene, Richards and Thompson all homered.

The All Stars easily defeated the Rangers 13 to 6; with Dale Legg and Lon Mettles homering.

The Braves beat the Beta 2 Miners 19 to 11. The losers credited Wayne Gibson with two over the fence.

The All Stars edged by the Raiders 10 to 9, despite a grand slam homer by the loser's Mike Gregg.

The Devils overwhelmed the Bat Boys 22 to 4 with homers by almost everyone on the team.

The Buccaneers squeezed by the Braves 9 to 8 in a thriller which went an extra inning.

The Eagles began action on July 7 defeating the Rangers 24 to 16.

Conners Big Hero!

The Snakes really romped over the Miners 35 to 3, with Harry Conners earning four homeruns . . . one a grand slam!

The Colts tamed the NC Squad 23 to 4. Jim Treadwell homered twice.

The last night of play last week saw four games.

The K-25 Gashouse Gang put the Knockers out of it 8 to 2.

The Devils downed the NC Squad 10 to 9; while the Bat Boys edged by the Beta 2 Miners, despite the fact they counted three less hits.

Finally, the All Stars conquered the Miners 28 to 9.

League standings follow:

Team	W	L
Eagles, Y-12	9	1
Snakes, Y-12	9	1
Colts, K-25	9	1
All Stars, Y-12	8	2
K-25 Gashouse Gang	8	3
Rangers, Y-12	7	3
K-25 Devils	5	5
Buccaneers, Y-12	4	6
9103 Braves, Y-12	4	6
Bat Boys, Y-12	4	7
NC Squad, Y-12	2	9
Beta 2 Miners, Y-12	2	9
Raiders, Y-12	1	9
Knockers, Y-12	0	10

Ben Etheredge Cops June Skeet Honors

Y-12er Ben Etheredge capped high Skeet honors for June as an even dozen firers hit the line recently. His handicap score was 49.541, several notches higher than his competition. Leon Bray followed in second place with 48,-984, and newcomer Alan Van Hull fired a 47.491. Exactly half of June's skeeters fired under penalty because of previous winnings.

June's target scores:

Firer	H'Cap Score
Ben Etheredge, Y-12	49.541
Bob Allstun, Y-12	49.323*
Carl Brewster, Y-12	47.531*
Jack Case, Y-12	46.290
Charlie Asmanes, Y-12	47.307
W. Davy Sr., K-25	48.887*
Vernon Raaen, K-25	48.878*
Bill Weathersby, Y-12	47.052
Fred Welfare, ORNL	50.000*
Leon Bray, Y-12	48.584
Alan Van Hull, Y-12	47.491
Perry Bullard, Y-12	48.313*

*Previous winners, under penalty.

Decline of the Tonsillectomy

By T. A. LINCOLN, M.D.

Not too many years ago, tonsillectomy was almost a ritual operation practiced on many children sometime between their third and eighth birthdays. Since the start of the antibiotic era, more and more surgeons and pediatricians have been critically reviewing the need for this procedure and its effectiveness. It is now gradually declining to its proper place.

Practices and attitudes have changed enough so that this emotionally charged subject can now be discussed before a lay audience. Not too long ago, a physician who performed many tonsillectomies would be greatly threatened by someone questioning his recommendations. Now, even the older physicians are aware that the indications for a tonsillectomy have been greatly restricted.

Dr. Lincoln

Prior to the antibiotic era, there were many reasons why tonsillectomy and adenoidectomy were frequently performed. There was little a physician could do for the child who had frequent episodes of tonsillitis or middle ear infections. After attending a child with numerous sore throats and earaches, watching him lose weight and become chronically pale and "sickly," it is not surprising that removing the tonsils seemed reasonable. In the pre-World War II days, just as now, mothers pleaded with their doctors to "do something." In retrospect, it is now clear that a few tonsillectomies were done more to quiet distraught mothers than to prevent recurring sore throats.

Numerous Complications

If a tonsillectomy and adenoidectomy were completely benign procedures, no one would complain. However, the overall death rate from this operation is one per 1,000. Serious complications occur in about 15 per 1,000. The deaths are due principally to adverse reactions to the anesthetic and post-operative hemorrhages. Complications include pneumonia, lung abscess and bronchiectasis, usually due to aspiration of pieces of tissue or blood into the bronchial tree.

The mortality rate and incidence of complications are much lower when the operation is performed by a highly skilled surgeon and the anesthesia is administered by an anesthesiologist. However, no matter how skilled or careful they may be, the incidence of fatalities and complications can never be reduced to zero.

In all cases, the hazards of allowing the tonsils to remain and to be treated medically must be weighed against the hazards of the operation. In some cases, surgery is clearly worth the small risk.

Indications of Need

The modern indications for a tonsillectomy and adenoidectomy include recurrent bacterial tonsillitis not responsive to medical management, peritonsillar abscess, recurrent middle ear infections and severe airway obstruction due to greatly hypertrophied adenoid tissue. An adenoidectomy alone is frequently sufficient to control ear infections and relieve the nasopharyngeal obstruction. Obviously, cancer of the tonsils is usually an indication for tonsillectomy.

A number of prospective studies have been performed in an attempt to determine whether a tonsillectomy reduces the incidence of respiratory infections in general, or sore throats and earaches specifically.

In 1968, Dr. H. E. Evans, of the Department of Pediatrics of Harlem Hospital and Columbia University, reviewed the statistical evidence regarding the effectiveness of tonsillectomy and adenoidectomy which had appeared in the medical literature. In his report, which appeared in **Clinical Pediatrics,** he concluded that there was "no compelling evidence of any long-term benefit." There were short-term benefits in children with severe recurrent tonsillitis. Recurrent middle ear infections responded about as well from adenoidectomy alone as the combined procedure.

Coughs, Earaches and Colds

Dr. W. J. E. McKee, of the Children's Department, Farnborough Hospital, Kent, Great Britain, performed a control study on 413 successive non-urgent cases referred for a possible tonsillectomy. They had had three or more isolated throat infections or acute respiratory infections with swollen glands during the past year. Some also had had coughs, earaches, and recurrent nasal colds. In half of the cases, chosen at random, surgery was postponed for two years. In the other half, it was done within six weeks. Children from five to seven years old who had their tonsils removed did better during the first year after surgery, at least as far as sore throats and earaches were concerned. After age seven, little difference could be seen. There was no difference in the incidence of sinusitis, bronchitis or colds in the two groups.

The days of taking all the children to the hospital for tonsillectomies are long past. Probably no more than three to five percent of children will ever have medical justification for a tonsillectomy or adenoidectomy.

Long Contract

(Continued from Page 1)

Generating Plant near Red Wing, Minn. The Prairie Island reactor, scheduled to begin operation in 1972, will generate approximately 530,000 kilowatts of electricity.

To date, the AEC has signed 32 toll enrichment agreements, 10 of them with United States firms and 22 with organizations abroad.

Toll enrichment, which began January 1, 1969, is an arrangement whereby privately owned uranium is enriched in Government plants. The customer furnishes uranium feed material to the AEC, pays an enriching charge, and in turn receives uranium enriched in the isotope U-235.

Uranium enriching services are performed at the AEC's three gaseous diffusion plants at Oak Ridge; Paducah, Ky.; and Portsmouth, Ohio.

NOT SO SAFE AT HOME

Seven times as many people are killed off the job as on the job. A year ago, the figures were about 14,000 persons kiled at work, 98,000 off the job—28,000 of whom were fatally injured at home.

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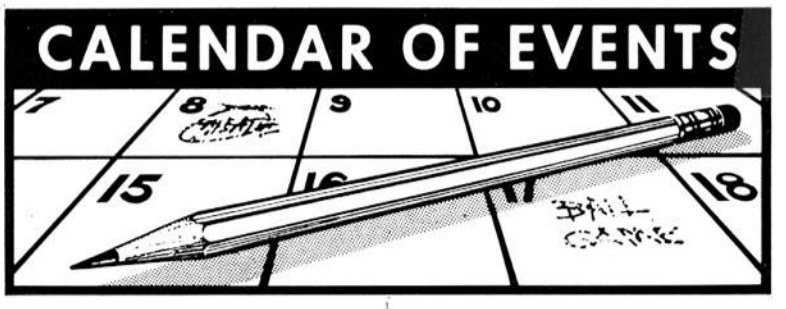

COMMUNITY

July 17

Dance under the sponsorship of the Atomic City Sportsmen and the Community Relations Council, Oak Ridge Armory, 9 p.m. Proceeds to go to the Peter Bynam Scholarship Fund. Donation: $3 per person. Tickets available from Y-12ers Wilbert Minter, 3-7213, and Chalmers Wilson, 3-7102.

July 19 & 26

Oak Ridge Community Art Center's Humanities Workshop, 1 to 4 p.m., Ridgewood Park. (Weather permitting.)

July 21, 23 & 28

Oak Ridge Community Playhouse Workshop. Everyone welcome. 7:30 to 10 p.m., Oak Ridge Playhouse.

Off to Jump-Off!

Smoky Mountain hikers will climb the Jump-Off this Sunday, July 19.

Because of the length and steepness of the hike, club members will spend Saturday night at the Club Cabin in the Brier. From the SMHC cabin hikers will trek up Porters Creek Trail to Lester Prong, and from there to the Jump-Off. A choice of return routes will depend on the conditions of the weather and the hikers. Oak Ridge leaders are Jim Botts and Fred Campbell.

TECHNICAL

July 17

Physics Division Seminar: "The International Neutron Data System," W. M. Good, ORNL Physics Division. East Auditorium, Building 4500-N, 3:15 p.m.

July 20

Electronuclear Division Information Meeting: Central Auditorium, Building 4500-N, 8:45 a.m.

July 21

Electronuclear Division Information Meeting: Central Auditorium, Building 4500-N, 8:45 a.m.

Physics Division Information Meeting: Central Auditorium, Building 4500-N, 10:30 a.m.

July 22

Physics Division Information Meeting: Central Auditorium, Building 4500-N, 8:45 a.m.

July 23

Biology Division Seminar: "Alteration of DNA Structure During Bacterial Conjugation," Wladyslaw Kunicki-Goldfinger, Warsaw University, Poland. Large Conference Room, Building 9207, 3:30 p.m.

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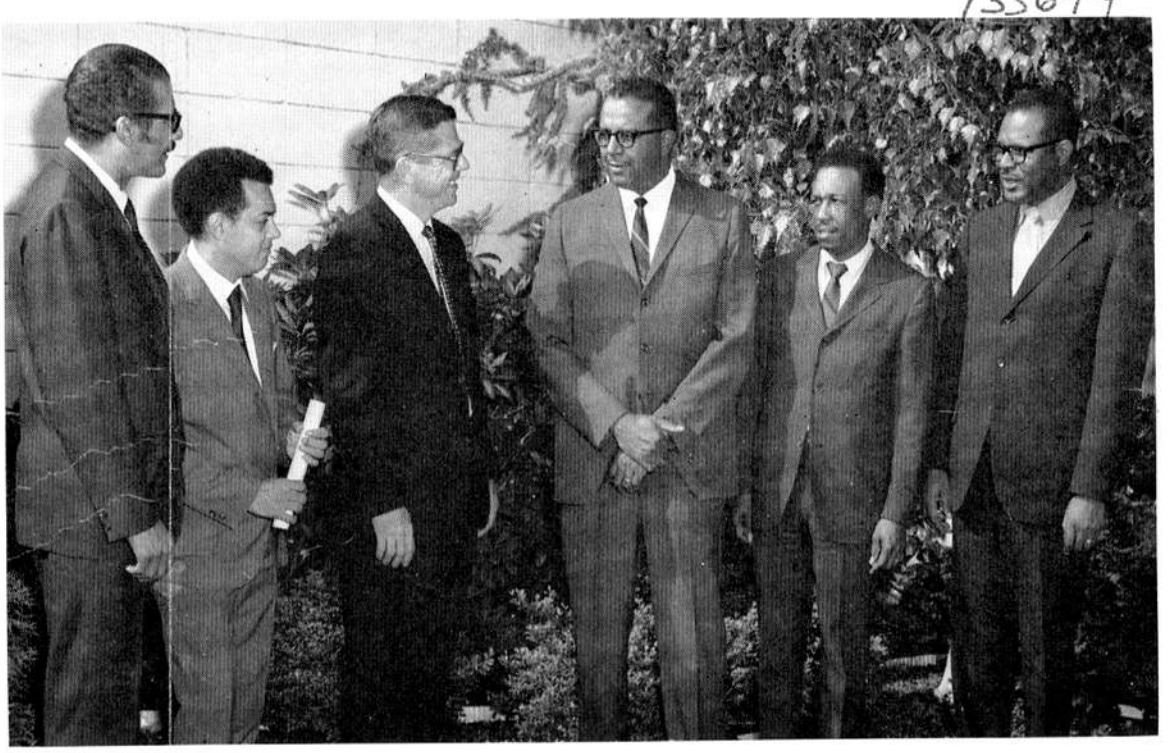

COORDINATORS VISIT OAK RIDGE—Representatives from five predominantly Negro engineering schools visited Oak Ridge this week to review the operation of a pilot cooperative education program being conducted at Union Carbide Corporation's Nuclear Division. The group was welcomed by Roger F. Hibbs, President of the Nuclear Division. From left are Prof. Hardy Liston, Jr., Chairman, Department of Mechanical Engineering, North Carolina A & T University; Prof. Isaac R. Proche, Jr., Department of Electrical Engineering, Southern University; Mr. Hibbs; Dr. George A. Ferguson, Director, Cooperative Education, Howard University; Andrew Minor, Director, Cooperative Education, Tennessee State University; and George Howard, III, Director Cooperative Education, Tuskegee Institute.